

## About the Departments

The **Department of Microbiology** was started in 2015 and since its inception it is contributing to the teaching as well as in research and playing pivotal role in teaching, training and research. The department is fostering research in the field of medical microbiology with a direct application to understand, prevent and cure the human diseases. It has established centralized microbial facility having BSL-2 lab. The department is also involved in the community service and awareness programs related to the medical microbiology.

The **Department of Zoology** aims to train the students in the diverse areas of modern biology through M.Sc. and Ph.D. programs. The students are prepared for the future by imparting quality education of the basic, applied and advanced aspects in life sciences with an emphasis on animal systems to achieve the goal to enrich the human, animal and environmental life.

The **Microbiology Department, AIIMS, Bathinda** vision is to provide up-to-date and holistic theoretical & practical training for MBBS, MD (Microbiology) and Ph.D. scholars, to carry out frontline research in all disciplines of medical microbiology and to serve the society through providing diagnostics services. The department has established BSL-2 lab equipped with RT-PCR for COVID-19 testing, college level VRDL under DHR-ICMR, and sentinel surveillance lab for zoonotic infections under One Health program of NCDC.

**Patron: Prof. Raghavendra P. Tiwari**

Vice Chancellor, CU Punjab

**Co-Patrons: Prof Ramakrishna Wusirika,**

Dean Incharge Academics, CU Punjab

**Prof. Sanjeev Thakur**

Dean, School of Basic Sciences, CU Punjab

**Convener: Prof. Monisha Dhiman**

### Organizing committee members:

#### **Department of Microbiology, CU Punjab**

Dr. Somesh Baranwal, Associate Professor and Head

Dr. Mukesh K. Yadav, Associate Professor

Dr. Pramod Kushawaha, Assistant Professor

Dr. Amit Singh, Assistant Professor

Dr. H. Nakibapher J Shangpliang, Assistant Professor

Dr. Roshan Kumar, Technical Assistant

#### **Department of Zoology, CU Punjab**

Prof. Anil K. Mantha, Professor and Head

Dr. Sunil K. Singh, Assistant Professor

#### **Department of Microbiology, AIIMS, Bathinda**

Dr. Kamla Kant, Associate Professor and Head

Dr. Sivanantham Krishnamoorthi, Assistant Professor

Dr. Jai Ranjan, Assistant Professor

Dr. Bhawna, Assistant Professor

## About Karyashala

Science and Engineering Research Board (SERB), a statutory body under the Department of Science and Technology, Government of India, initiated '**Accelerate Vigyan (AV) Scheme**' to provide a big push to high-end scientific research and prepare scientific manpower which can venture into research careers and knowledge-based economy. AV aims to expand the research base in the country, with three broad goals-consolidation/ aggregation of all scientific training programs, initiating high-end orientation workshops, and creating opportunities for research internships. Under AV scheme, is an attempt to boost Research & Development in the country by enabling and grooming potential PG and Ph.D. level students by developing dedicated research skills in selected areas/disciplines/fields through high-end orientation workshops '**KARYASHALA**'. This will be especially important for those researchers who have limited opportunities to access such learning capacities/ facilities/infrastructure.

## About the Institutions

**The Central University of Punjab**, has been established in 2009 along with other new Central Universities by an Act of Parliament (No 25, of 2009). Central University has completed a remarkable journey of 14 years. University is accredited with 'A+' grade in 2023 in the second accreditation cycle by NAAC. It has secured 95<sup>th</sup>, 87<sup>th</sup> and 84<sup>th</sup>, 81<sup>st</sup> rank in the year 2019, 2020 2021 and 2022 respectively in the University category of NIRF. It has 31 departments in Sciences, Technology, Education, Humanities, Social Sciences and Law disciplines where it offers PG and Ph.D. programmes. The university has a mission of providing a wide range of instructional and research facilities across integrated and cross-disciplines, promote innovation in teaching, learning and research, and cross-pollinate new ideas, new technologies and new world-views.

**AIIMS, Bathinda** is one of the apex healthcare institutes established in year 2019 by the Ministry of Health & Family Welfare, Government of India under the Pradhan Mantri Swasthya Suraksha Yojna (PMSSY). It is spread over a large area of about 177 Acres and is surrounded by lush green parks.



# High End Workshop on “Immunological Tools and Techniques to Detect the Innate Immune Responses” (Under the Karyashala Scheme – A SERB Scheme)

**05<sup>th</sup> December – 11<sup>th</sup> December, 2023**

Sponsored by SERB, DST, Govt. of India, under  
the Accelerate Vigyan Scheme



## Organized by

**Department of Microbiology  
in collaboration with Department of Zoology  
Central University of Punjab, Ghudda,  
Bathinda India  
&  
Department of Microbiology  
AIIMS, Bathinda**

**Under the Aegis of Consortium of  
Higher Education of Bathinda**

[www.cup.edu.in](http://www.cup.edu.in)

<https://aiimsbathinda.edu.in>

## Objectives of the Workshop

The immunology Karyashala aims to provide hands-on training to PG/Ph.D. students in tools and techniques applicable to detect the innate immune responses which is crucial to kill the pathogen and enhance the host defense machinery. The participants from universities, colleges and research institutes will be familiarized with details of the immune cell culturing, instrumentation, data acquisition and analysis with expert lectures and experimental sessions.

## Topics to be covered

- ❑ *The interface of the innate immune system and microbial pathogens*
- ❑ *The role of innate immunity in protective versus deleterious immune responses and thereby, in disease outcome*
- ❑ *Fundamental concepts as well as new advances in the role of innate immunity in host resistance and pathogenesis of infectious diseases*
- ❑ *Utilization of immune methods in clinical set-up*

## Session Modules

1. *Cells of Innate immunity and their activation*  
*Respiratory Burst: Spectrophotometric assays*  
*Cytokines, ELISA*
2. *Innate Immune Recognition (PRRs) such as Toll-Like Receptors (TLRs), NLRs (Inflammasome activation):*  
*PCR and Western blotting*
3. *Innate Immune defense mechanisms: Phagocytosis, Apoptosis: Microscopy and Western blotting.*

## Who can Attend

Karyashala is open to PG and Ph.D. students from Institutes, Colleges, and Universities in India. Applicants pursuing PG/Ph.D. programmes in any specialization of life sciences and related departments are eligible. Students who have recently completed their PG programs are also eligible. Preference will be given to the Ph.D. students having interest in immunological techniques and its applications in their research works.

## Eligibility of Applicants

PG and Ph.D. scholars are eligible. Selected candidates will be intimated through email and they have to pay registration fee, and account details will be shared in the mail. After successful completion of the workshop participants will be given certificates.

## Accommodation and Food

Accommodation and food will be provided to all the selected participants for the entire workshop duration.

## Travel Support

Selected participants will be offered travel support (Train 3rd AC/Sleeper class/Bus fare as per GOI rules) to attend the workshop. Ticket/fare copy submission is must for the claim.

## Important Dates

Last date for Registration: **20<sup>th</sup> Nov 2023**

Notification of Selection: **27<sup>th</sup> Nov 2023**

Payment of the registration fees **Rs.1000/-** (only selected candidates): **28<sup>th</sup> Nov-02<sup>nd</sup> December, 2023**

## How to apply: Number of seats: 25

Limited number of seats are available for the participants perusing their studies or research in immunology or related disciplines. Kindly do the needful to complete the registration via link:

<https://forms.gle/58bG7fsyJc2kQUe5A>

The selected participants have to submit Endorsement cum No Objection Certificate issued by the Principal/Head of the Department/Thesis Supervisor at the time of fees submission.

## Venue:

**Department of Microbiology, Central University of Punjab, Bathinda & Department of Microbiology, AIIMS**



**For any query, please contact:**  
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